

Q-FIVER



THE OFFICIAL NEWSLETTER OF THE OH-KY-IN AMATEUR RADIO SOCIETY
CINCINNATI, OHIO — WWW.OHKYIN.ORG

Calendar of Upcoming Events

Monday	October 4 @ 9:00 PM	SSTV Net (146.670 Repeater)
Tuesday	October 5 @ 7:30 PM	Club Meeting (Lockland Church of the Nazarene)
Wednesday	October 6 @ 9:00 PM	Tech Talk Net (146.670 Repeater)
Monday	October 11 @ 9:00 PM	SSTV Net (146.670 Repeater)
Tuesday	October 12 @ 7:20 PM	Board of Directors Meeting (same Zoom info as club meeting)
Wednesday	October 13 @ 9:00 PM	Tech Talk Net (146.670 Repeater)
Monday	October 18 @ 9:00 PM	SSTV Net (146.670 Repeater)
Wednesday	October 20 @ 9:00 PM	Tech Talk Net (146.670 Repeater)
Monday	October 25 @ 9:00 PM	SSTV Net (146.670 Repeater)
Wednesday	October 27 @ 9:00 PM	Tech Talk Net (146.670 Repeater)
Monday	November 1 @ 9:00 PM	SSTV Net (146.670 Repeater)
Tuesday	November 2 @ 7:30 PM	Club Meeting (Location TBD)

OH-KY-IN Repeaters

146.670 (-) Clifton
146.625 (-) Edgewood (Fusion)
146.925 (-) Delhi (Fusion)
443.7625 (+5)
All repeaters require a 123.0 Hz CTCSS (PL) tone.
APRS on 144.390 MHz
K8SCH-10 Edgewood WIDEn (off-air)
Packet on 145.010 MHz
K8SCH-7 Digipeater (off-air)

Meeting Information

Our October meeting will be held at Lockland Church of the Nazarene (335 W. Wyoming Ave.). We will continue to offer Zoom video conferencing as an option. Please join us at 7:30 PM Eastern time each first Tuesday of the month. The Zoom call will open at about 7:20 PM for you to join. The passcode is 146670

<https://zoom.us/j/996062859>

If you are unable to join online, you may join by telephone at (301) 715-8592 with a meeting code of 996 062 859 and passcode of 146670. Long distance rates will apply.

Life Members

John Phelps	N8JTP
Kenneth E Wolf	N8WYC
John W Hughes	AI4DA
Karl R Kaucher	KK4KRK
Howard Hunt	NG8P
Fred Schneider	K9OHE
Dan Curtin	KF4AV
Steve Weeks	AA8SW
Kelly Hoffman	K8KAH
Cindy Shipp	KB8WEI
Jerry Shipp	W1SCR
Bob Craig	K8RC
Mick Cook	KD8IOQ

October Meeting News

We will continue offering hybrid meetings with our October meeting, having both an in-person meeting as well as Zoom connectivity. Due to the days getting shorter, we're moving indoors for the meeting, gathering at Lockland Church of the Nazarene, located at 335 West Wyoming Ave. in Lockland. It's right off I-75 at exit 12 (the Reading/Lockland exit southbound and the Davis St./Lockland/Reading exit northbound). Enter through the glass door by the mailbox under the awning. Be aware that there are about 5 steps down into the meeting room. Thanks to Steve N8PUP for making this facility available to the club for our meeting!

Harvest Home Fair Results

by Bruce Vanselow, N8BV

Manpower, we flat out just didn't have enough. There is no doubt in my mind that if we would have had adequate manpower we could have earned another \$1,000. We did "OK" in the afternoons but Friday and Saturday nights were super busy!! No one had a chance to take a break so we just kept right on working until the end of the night.

Not having enough manpower means that those workers that we did have just had to work that much harder. And for that I certainly do appreciate every worker that we did have!

We couldn't have asked for any better weather, it was fantastic and I'm sure that is a good part of why we were so busy. They had some dynamite entertainment to boot. I'll bet that the crowd was the best that it has been in many years.

Of course the more money that we put in the till equates to more money for the club treasury. I hope that when the Harvest Home Fair comes around next year that you will really consider helping out.

Our commission check arrived September 30th in the amount of \$2,203.70

A BIG thank you goes out to those who did work the event this year.

- KD8ILY Dennis NC8V Ted KC8ZLB Mike
- KD8MMY John KD9OVV Matt KD8AA Dan
- KE8DZS Rocky AC8UJ Ryan KD8YVF Chris
- N8BV Bruce

73, Bruce N8BV

Brunch Bunch

by Bruce Vanselow, N8BV

The next Brunch Bunch will be held Saturday, October 9th, at 1 PM. The location for October is Jim & Jacks on the River located at 3456 River Road, 45204. Jim & Jacks is on the corner of River Road and Lilienthal Street in Riverside.

Jim & Jacks on the River is "Where the Tri-State Meets for Great Food & Music."

For a look at the menu as well as driving directions, go to: www.jimandjacks.net

Remember that the Brunch Bunch always meets the second Saturday of every month at 1 PM at a location to be announced each month.

If you can't join us this month, maybe you'll be available to join us in the months ahead.

As always I'm looking for suggestions on what restaurant you think might be a good place for the Brunch Bunch to visit in the future.

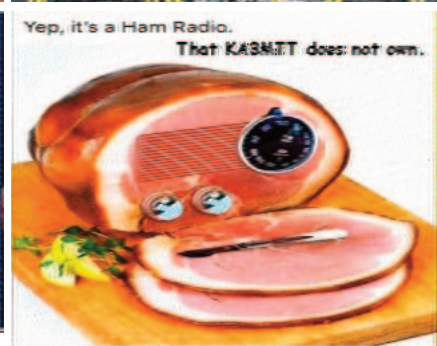
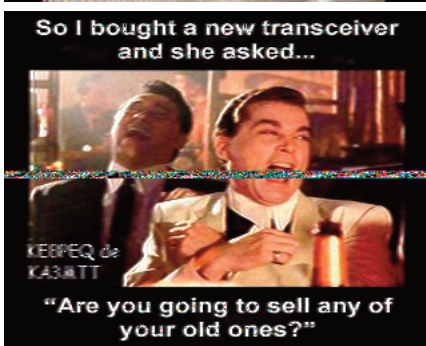
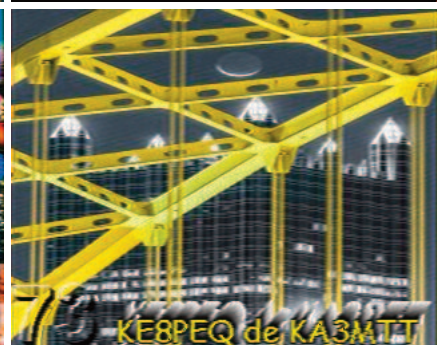
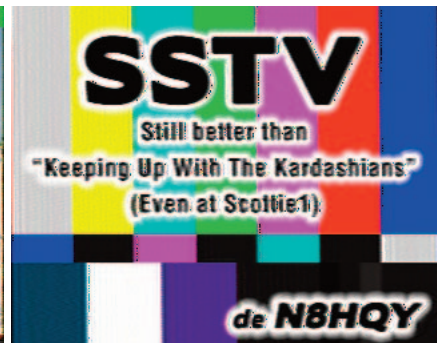
73, Bruce N8BV

Photo by Ryan Owens AC8UJ

OH-KY-IN SSTV Net Back On The Air

by Devin Spielman, KE8PEQ

The restarted slow scan net is going strong. But we're looking for more interested people if you're interested in slow scan transmitting or receiving hop onto the 146.670 repeater PL123 Hz Mondays at 9:00 EDT. Participants are limited to two images. Here are some examples from recent nets. If you have questions about slow scan be sure to check into the OH-KY-IN Tech Talk net. Address images to KE8PEQ.



Modulation and Bandwidth – an Inseparable Couple

by Steve Weeks, AA8SW

At the last monthly meeting, the question was raised – how wide is the transmitted FM signal on a 2-meter band OHKYIN repeater? I had an idea about the answer since a very similar question appears in the General Class license exam question pool, but I did not know any of the details and decided to share my research results in this brief article, in case anyone else is also interested in how FM differs from the older and more familiar AM and SSB modulation types.

By the way, the bandwidth of a 2-meter FM signal is something that repeater users do not ordinarily need to be concerned about. Ham radio equipment designed for that band is already calibrated to use the standard modulation and demodulation parameters and channel spacing. However, if repeater signals are being received on non-Ham equipment, such as a software defined radio (SDR), then it becomes an important question, and that was the context in which the query was made at the meeting.

Any method of audio modulation of a radio signal must encode, and be able to decode, the two fundamental properties of audio – (1) the level (volume) of the audio, and (2) the frequency (pitch) of the audio signal. How the modulation method accomplishes this will dictate how much frequency spectrum (bandwidth) it must necessarily consume in that process.

Since FM characteristics are most effectively described by comparing them to the more basic and familiar amplitude modulation (AM), and its close relative single sideband (SSB), let's briefly review the latter.

AM, the original method of transmitting sound, is the essence of simplicity at a technical level – a constant-frequency RF carrier wave is mixed directly with the audio signal that is to be transmitted. Mixing two waves together produces the sum and the difference of the two waves (that's a General Class exam pool question, also). The amplitude of the audio is reflected in the amplitude of the combined signal, and the frequency of the audio is reflected by how much the transmitted signal deviates from the fixed carrier frequency. For example, if a 1 kHz tone is transmitted, a spike 1 kHz above the carrier is generated, and another spike also occurs 1 kHz below the carrier. In other words, two sidebands are created, above and below the carrier, which contain all of the volume and pitch information of the audio signals, and the sidebands are mirror images of each other. Each sideband has the same width as the maximum audio frequency, so the total bandwidth is double the maximum audio frequency. For amateur radio, where it is not legal to transmit music, something in the range of 3 kHz is adequate to transmit the sound of a voice, so that is the maximum audio frequency used by convention (and in some cases by FCC rule), resulting in a maximum 6 kHz AM bandwidth.

Before long, it occurred to radio experimenters that transmitter power was being wasted on the AM carrier (which conveys no information) and in sending two duplicative sidebands. So SSB was born, with the carrier and one of the sidebands being suppressed, and only one sideband transmitted – with all of the power concentrated into that sideband, typically having a maximum bandwidth of 3 kHz when used only for voice.

So how is frequency modulation (FM) different? As discussed above, AM encodes the two essential characteristics of audio -- volume and pitch -- simultaneously, by embedding an image of the complete audio signal on top of the RF carrier. FM, on the other hand, separates out the two critical audio characteristics and handles them in two different ways. The volume of the audio signal is encoded as the deviation up and down of the FM carrier, within arbitrary limits that the designer of the mode can determine. For 2-meter amateur radio FM in the United States, the standard maximum deviation for the volume portion of the signal is 5 kHz (both up and down, so a maximum of 10 kHz of bandwidth). Then the pitch components of the voice are encoded as frequency deviation in addition to the deviation related to volume, up to a maximum deviation (up and down)

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equal to the highest frequency of the audio. Thus, the standard maximum frequency of 3 kHz for voice audio can consume an additional 6 kHz of bandwidth (in addition to a maximum of 10 kHz for the volume information, yielding a total maximum bandwidth of 16 kHz). This formula is known as Carson's Rule, after the person who developed it as a method of estimating maximum FM bandwidth in 1922. In practice, the bandwidth will usually be less than that because at any given time, either the volume or audio frequency or both will be at less than maximum levels and the FM bandwidth needed at that instant will be correspondingly narrower.

In an unrealistically-simplified example, with just the volume varying, the result could look like:

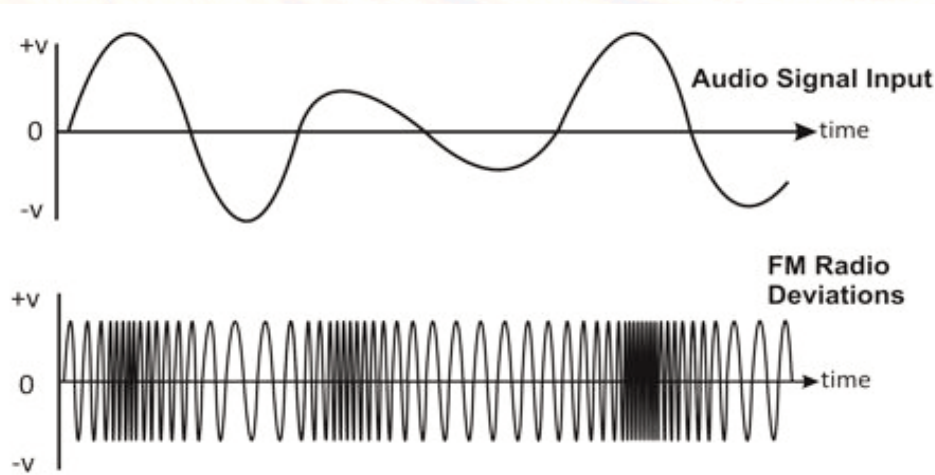


Image credit: hamradioschool.com

Note that the amplitude of the waves remains constant, only the frequency varies. The loudest audio (see the two peaks near the beginning and end of the graph) result in the highest frequency (dark areas in the FM graph where the waves are packed closely together). Of course, a real-life example with pitch as well as volume constantly varying would result in an enormously more complicated graph than this – it's greatly simplified just to demonstrate the principle.

So, the mystery behind this General Class exam question is dispelled (where “deviation” refers to the volume component on each sideband):

G8B06 What is the total bandwidth of an FM phone transmission having 5 kHz deviation and 3 kHz modulating frequency?

- A. 3 kHz
- B. 5 kHz
- C. 8 kHz
- D. 16 kHz**

73!

September, 2021 Meeting Minutes

Minutes of September 7th, 2021 Member Meeting

The meeting was called to order at 7:32 PM by Ryan AC8UJ with the Pledge of Allegiance. The club met at Daniel Drake Park and via Zoom.

Guests: Three

- Matt Young KD9OVV – new member.
- Richard Parker – new member, currently working on his license.
- Corey Laudenback – working on his license.

New Licenses or Upgrades: none

Attendance: 33

Health and Welfare: Kitty W8TDA had a friend unexpectedly pass away.

Brag Sessions:

- Cesi KD8OOB did another POTA activation, this time at K-7708 – Mill Springs Battlefield National Monument in Kentucky with 33 QSOs, all QRP at 10W.

Prior Meeting Minutes: There was a communication mix-up between Ryan AC8UJ and Cesi KD8OOB regarding the August meeting minutes. The ones published in the Q-Fiver were Ryan's notes. The more in-depth minutes recorded by Cesi were published later and those are being considered for correction and acceptance. There were no corrections. Dennis KD8ILY moved and Mike KD8ZLB seconded accepting the minutes. The motion passed and the minutes were accepted.

Membership: Nathan KA3MTT reported we are up to 163 members!

Silent Keys: Not present, none reported.

Tech Operations: Not present, but Bruce N8BV reported the new antenna for the 67 repeater was to arrive towards the end of August; it still hasn't arrived.

Classes/Exams: Mike KD8ZLB reported that Shannon at the Red Cross will be opening the building November 11th. Hopefully we can start to have in person classes there again in November.

Fox Hunts and ARDF: Brian K4BRI reported that nothing was held in August as there was little interest at the time.

Library: Not present, nothing reported.

Nets:

- Tech Talk - Bruce N8BV reported holding steady at 17-18 check-ins a week.
- WinLink - Ed K8EAF reported that the net is back on the air after a week hiatus at the request of the WinLink Admins for hurricane traffic. To join, send a message to Ed K8EAF.
- SSTV – Not present, but it was reported that there have been 10-12 check-ins with about 5 or 6 of them transmitting messages.

Website: Rocky KE8DZS reported no news is good news!

QCEN: Pat KD8PAT reported:

- QCEN will have a hybrid meeting at the Red Cross and via Zoom on Friday, September 17th. Masks are required at the Red Cross. For a link to the Zoom meeting, please contact Steve N8TFD. Ohio Section Emergency Coordinator Stan Broadway N8BHL will speak about emergency awareness and Multi-Agency Radio Communication System (MARCS).

ARES: Not present. Mike KD8ZLB reported:

- Successfully supported Riverfest.
- Oktoberfest Zinzinnati is coming up and requires 108-man hours; contact Mike KD8ZLB to help out at the ROC.
- The US Women's National Soccer Team will be playing at TQL Stadium this month in a friendly match with Paraguay. This is just a preliminary for what will be needed for the US Men's National Soccer Team versus Mexico in November. FEMA is considering the men's game a major event on par with the All-Star Game and will require plenty of volunteers.
- Pat KD8PAT also reported that Bryan KC8EGV was appointed the Assistant Section Emergency Coordinator for Ohio. Congratulations!

Brunch Bunch: Bruce N8BV reported Brunch Bunch

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will be Saturday, September 11th at 1:00 PM at the Cabana on the River in Saylor Park.

Events:

- 9/10 – 9/12 – Harvest Home Fair – Bruce N8BV needs lots of volunteers to run the Big Six booth. If you don't know how, they'll teach you!
- 9/11 – OSPOTA. Cesi KD8OOB will be working OSPOTA – Ohio State Parks on the Air. If anyone wants to join him, he will use the club's call.
- 10/29 – 10/31 – Flying Pig Weekend. There will be plenty of opportunities to volunteer as there are many races that weekend. Contact Steve N8TFD to volunteer.

Old Business

- Ryan AC8UJ reported that the by-laws updates are still on hold.
- Grant Progress:
 - Ryan AC8UJ reported all three computers have been built and are functional, all hardware has been purchased except for the cellular modems, which will happen when a connectivity provider is selected, which is being worked on.
 - Cesi KD8OOB has started to assemble the purchase orders.

New Business:

- Ryan AC8UJ has reported that the board is considering selling club t-shirts as a fundraiser. People showed a fair amount of interest. If you have other fundraising ideas, please contact any member of the board or better yet, present your idea at the next board meeting, which is via Zoom the second Tuesday of the month start at approximately 7:20 PM ET.
- Ryan AC8UJ also reported that George N3VQW has resigned as club secretary due to escalating time conflicts with work.
- Cesi KD8OOB reminded everyone that club elections are coming up in a few months and to please consider running for an office. If you have a question about any of the positions, please contact the current office holder or another board member. The position of secretary is currently open, and the current treasurer will be retiring and not seeking reelection, so those positions must be

filled. No one does their job alone as the rest of the board backs each other to make sure we are all a success. The club is only as good as the people who volunteer their time to make it great!

Treasurer: Brian K4BRI submitted the August financial report and it was filed for audit.

Program: Nathan KA3MTT was set to talk about the Cuban jammers, but they have stopped jamming, probably due to the recent hurricanes in the region. Instead, he presented on contesting with a panadapter and your current rig.

Split-the-Pot: Bruce N8BV collected \$34 with Matt KD9OVV winning the \$17 split.

Ryan entertained a motion to adjourn, which was accepted, and the meeting was adjourned at 8:41 PM ET.

Respectfully submitted, Cesi DiBenedetto KD8OOB,
Vice President

Education Opportunity

The Cuyahoga Falls ARC (www.cfarc.org) will offering free online Technician and General licensing classes. The Tech classes begin October 10th. If you are interested, please visit <http://tiny.cc/cfarc-tech> for details. You **must** pre-register for the classes. You may also contact Anthony Luscre K8ZT at k8zt@arrl.net or (330) 650-1110 or Jim Grover N8PZL at n8pzl@arrl.net or (330) 928-8921. The classes will be held on Sundays from 1:30 PM to 4:00 PM ET. The General class is not yet scheduled but expected to begin in January or February, 2022.

Supporting OH-KY-IN

Of course we appreciate your membership dues and all of the ways you give time and energy to the club, but did you know you can also support OH-KY-IN just by doing things you already do?

Kroger Community Rewards is a great source of income for the club and requires no effort! Visit <http://www.krogercommunityrewards.com/> and set us as your charity. We are organization QY352.

You can also support us through Amazon Smile.

Contact Bruce N8BV for details about either program.

DX / Sp. Events - October 2021

Sun	Mon	Tue	Wed	Thu	Fri	Sat
					1 C92R-Mozambique Thru 10-30 	2 3B8 - Mauritius thru 10-15 ----- S90K - Sao Trimpe & Principe thru 10-16
3 Fire Prevention Week Special Event Oct 3-Oct 9, 0000Z- 2359Z, N0F-N9F+, East Hanover, NJ. Siemens Fire Safety USA Amateur Radio Club. 212.5 14.225 7.175 3.800	4 Senator Barry M. Goldwater Memorial and AZ QSO Party Oct 4-Oct 9, 1500Z- 2100Z, K7UGA, Chan- dler, AZ. Central Arizona DX Associa- tion. All bands, all modes	5	6	7	8 2021 Antique Steam & Gas Engine Fall Show Oct 8-Oct 10, 1200Z- 2200Z, KT9K, Boon- ville, IN. Ohio Valley Amateur Radio Club. 7.070 7.270 14.070 14.270	9 J5T - Guinea Bissau thru 10-22 
10 PZ5 - Surinam thru 10-20 	11	12 JW6VDA - Svalbard Thru 11-1 	13	14	15	16 JOTA/JOTI Oct 16, 1300Z-1900Z, W1M, Russell, MA. Western Mass Council --BSA. 7.060 7.250 14.060 14.250.
17 Shenandoah National Park Special Event Oct 17-Oct 23, 0600Z -0600Z, W4DO, Charlottesville, VA. Albemarle Amateur Radio Club. 7.240 14.300	18 PJ7JA - Sint Maarten thru 10-23 	19	20	21 3DA0RU - eSwatini Thru 11-8 	22 Deer Island MS 0115 - US Islands Awards Program - Expedition Oct 22-Oct 25, 2000Z -2000Z, K5D, Gautier, MS. 14.250 to 14.260 MHz 7.250 MHz 21.350 Mhz	23 Historic Beaumont Hotel Special Event Oct 23, 1400Z-2100Z, W0T, Beaumont, KS. Flint Hills Amateur Radio Club. 14.275 +/-
24 C5C - Gambia thru 11-19 ----- PJ5 - St Eustatius Thru 11-1	25 C6AHB - Bahamas Thru 11-6 	26 HD8R - Galapagos Thru 11-7 	27	28	29	30 Remembering the Edmund Fitzgerald Oct 30-Oct 31, 1500Z -2355Z, W0JH, - SARA. 21.360 14.260 7.260 3.860
31 						

Prepared by Nathan Ciufu, KA3MTT

Committee Chairs & Appointments

Technical Operations Gary Coffey KB8MYC
 ARPSC Representative Jerry Shipp W1SCR
 Volunteer Examiners Brian DeYoung K4BRI
 QCEN Representative Pat Maley KD8PAT
 Membership Nathan Ciufo KA3MTT
 Fundraising Bruce Vanselow N8BV
 Education Michael Niehaus KD8ZLB
 Repeater Control Ops Mgr. . . Bruce Vanselow N8BV
 PIO Devin Spielman KE8PEQ
 Librarian Justin Moore KE8COY
 Digital Group Jerry Shipp W1SCR
 Q-Fiver Editor Ryan Owens AC8UJ (interim)
 Field Day Eric Neiheisel N8YC
 Historian Dale Vanselow KC8HQS
 Fox Hunters Dick Arnett WB4SUV
 Equipment Manager Andrew Cornuelle K8AKC
 Webmaster George Gardei N3VQW
 Silent Key Bryan Hoffman KC8EGV
 Tech Talk Net Manager Bruce Vanselow N8BV
 K8SCH QSL Manager Bob Frey WA6EZV
 TV/RFI Dick Arnett WB8SUV

OH-KY-IN Officers

President Ryan Owens, AC8UJ
 Vice President Cesi DiBenedetto, KD8OOB
 Secretary (Vacant)
 Treasurer Brian DeYoung K4BRI
 Director Mike Niehaus, KD8ZLB
 Director Bruce Vanselow, N8BV
 Director Dennis McGrath, KD8ILY
 Trustee Bruce Vanselow, N8BV

**Consider a Donation to
OH-KY-IN**

Did you know that OH-KY-IN ARS has been recognized by the Internal Revenue Service as a 501(c)(3) charitable organization? That means anyone who itemizes on their Federal return can take a charitable deduction for a contribution to OH-KY-IN, as long as it qualifies under the general rules applicable to all other charitable contributions (for example, the contribution must be in cash, or other property which the organization has agreed to accept; the value of volunteered services is not deductible). Membership dues, such as the cost of a life membership, may even be deductible; consult your own tax advisor for details if considering that. Posthumous donations by Will or by naming the organization as beneficiary of a financial account are also welcome. SPECIAL OPPORTUNITY under COVID legislation — extra deductions may be possible. Please consider taking advantage of this one-time opportunity if you don't itemize.

PIO Appointed

OH-KY-IN has a Public Information Officer once again! Ryan AC8UJ recently appointed Devin Spielman KE8PEQ as our PIO. The position has been open for a while now and Devin expressed interest in the position. We look forward to the energy that Devin will bring to this role and the publicity he will create for us!

Newsletter Submissions

Please send any submissions you would like included in upcoming newsletters to Ryan, AC8UJ. All content is welcome! You can e-mail content to him at his callsign at arrl.net. Please send all content either as plain e-mail text (attach any photos or graphics) or as a PDF file. Depending on the spacing needs of the particular issue, Ryan may reformat your content and adjust the layout. Because of this, if you send a PDF, please also include any graphics used as attachments.

Please remember to **renew** your membership!

We need all of you to keep OH-KY-IN going strong!



OH-KY-IN Amateur Radio Society is one of the leading amateur radio organizations in the Cincinnati, Ohio area and has been for most of its 50-plus year history. We are a 501(c)(3) nonprofit organization dedicated to the advancement of all things radio.

No matter the amateur radio interest, OH-KY-IN members are involved.